



# ENERGY SAVINGS FOR BUSINESS

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## **CES Program Compressed Air Checklist**

January 4, 2023

Version 1.0



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## **INTRODUCTION**

This document is intended as a guide to support the submission of accurate and complete Compressed Air project applications. All applicants with Compressed Air projects should ensure the application meets the CES Eligibility Requirements set out in the Participant Terms and Conditions, Contractor Code of Conduct and Eligible Measures List. The applicant must submit the requested documentation and answer the questions contained within this document.

This checklist includes guidance for what needs to be entered in each input field at Step 4 and Step 5 of the Application process. Step 5 specifically describes which documents need to be uploaded and their purpose.

## **GUIDANCE ON APPLICATIONS**

The following sections provide guidance on Compressed Air applications, ensuring that they are complete, accurate and comprehensive.

The applicant and/or contractor will also need to provide the following information in Step 4 and Step 5 of the application submission, as further described in the tables below.

## STEP 4 OF PRE-PROJECT APPLICATION

### COMPRESSED AIR STORAGE

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Pressure (PSIG)	Enter pressure of compressed air used in PSIG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Type of Air Compressor	Select from list the air compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Is Tank Primary?	Select either Yes or No.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
HP of Air Compressors	Enter HP of air compressors.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Air Receiver Volume (USG)	Enter volume of air receiver in USG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Age of Air Compressor	Enter age of air compressor.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Approximate Average % Loading of Compressors	Enter average loading of compressors in percentage.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Storage Specification Sheet	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>

## CYCLING OR THERMAL MASS REFRIGERATED DRYER

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Pressure (PSIG)	Enter pressure of compressed air used in PSIG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Type of Air Compressor	Select from list the air compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Approximate Average % Loading of Compressors	Enter average loading of compressors in percentage.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Are you Replacing a Non-cycling Refrigerated Compressed Air Dryer?	Select either Yes or No.	<ul style="list-style-type: none"> <li>• Used for checking if the measure is eligible.</li> </ul>
Size of New Dryer (CFM)	Enter new dryer size in CFM.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Number of Air Compressors in Operation	Enter number of air compressors in operation.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Horsepower of Air Compressors in Operation	Enter HP of air compressor in operation. If multiple compressors of varying capacity are installed, then enter the average value.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Number of Air Compressors on Standby	Enter number of air compressors on standby.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Horsepower of Air Compressors on Standby	Enter HP of air compressors on standby. If multiple compressors of varying capacity are installed, then enter the average value.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Dryer Specification Sheet	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>

Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"><li>• Calculate eligible incentive.</li><li>• Post-project QA/QC.</li></ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"><li>• Calculate eligible incentive.</li><li>• Post-project QA/QC.</li></ul>

## DESSICANT DRYER DEWPOINT DEMAND CONTROLS

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Pressure (PSIG)	Enter pressure of compressed air used in PSIG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Type of Air Compressor	Select from list the air compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Approximate Average % Loading of Compressors	Enter average loading of compressors in percentage.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Number of Air Compressors in Operation	Enter number of air compressors in operation.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Horsepower of Air Compressors in Operation	Enter HP of air compressor in operation. If multiple compressors of varying capacity are installed, then enter the average value.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Number of Air Compressors on Standby	Enter number of air compressors on standby.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Horsepower of Air Compressors on Standby	Enter HP of air compressors on standby. If multiple compressors of varying capacity are installed, then enter the average value.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Are you replacing a fixed, timer regeneration control?	Select either Yes or No.	Used for checking if the measure is eligible.
Size of Dryer (CFM)	Select either Yes or No.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Desiccant Dryer DDC Specification Sheet	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> </ul>

		<ul style="list-style-type: none"><li>• Post-project QA/QC.</li></ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"><li>• Calculate eligible incentive.</li><li>• Post-project QA/QC.</li></ul>

## LOW PRESSURE DROP FILTER

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Pressure (PSIG)	Enter pressure of compressed air used in PSIG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Type of Air Compressor	Select from list the air compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Number of Air Compressors in Operation	Enter number of air compressors in operation.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Horsepower of Air Compressors in Operation	Enter HP of air compressor in operation. If multiple compressors of varying capacity are installed, then enter the average value.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Number of Air Compressors on Standby	Enter number of air compressors on standby.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Horsepower of Air Compressors on Standby	Enter HP of air compressors on standby. If multiple compressors of varying capacity are installed, then enter the average value.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Are you replacing a standard, coalescing filter?	Select either Yes or No.	Used for checking if the measure is eligible.
Size of Existing Filter (CFM)	Enter existing filter size in CFM.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Diameter of Existing Filter (in)	Enter existing filter diameter in inches.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Pressure Drop across Existing Filter (psi)	Enter pressure drop across existing filter in PSI.	Used for checking if the measure is eligible.
Filter Specification Sheet	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>

Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"><li>• Calculate eligible incentive.</li><li>• Post-project QA/QC.</li></ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/ final quote.	<ul style="list-style-type: none"><li>• Calculate eligible incentive.</li><li>• Post-project QA/QC.</li></ul>

## NOZZLES

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Pressure (PSIG)	Enter pressure of compressed air used in PSIG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Retrofit Scenario	Select from the list the retrofit scenario type: <ul style="list-style-type: none"> <li>• Installed on Open Pipe</li> <li>• Replacing Existing Nozzle</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Application Type for Nozzles	Enter application type for nozzles.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Type of Air Compressor	Select from list the air compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Nozzle Specification Sheet	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>

## VFD AIR COMPRESSOR

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Existing Compressor Rated Size HP	Enter existing compressor rated size in HP.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Existing Compressor Rated Flow Capacity CFM	Enter existing compressor rated flow capacity in cubic feet per minute.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Nameplate Picture of Existing Compressor	Upload the nameplate picture of existing compressor.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Existing Compressor Type	Select from the list the existing compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Estimated Annual Hours of Operation	Enter estimated annual hours of operation.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
New Compressor Type	Select from the list the new compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Specification Sheet of New Compressor	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/ final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>

## ZERO LOSS DRAIN

Field	What to Enter	How Data or Input Provided is Used
Quantity	Enter the number of measures being installed.	<ul style="list-style-type: none"> <li>• Used to calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Existing Drain Type	Enter type of existing drain.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Existing Drain Picture	Upload the existing drain picture.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Pipe Diameter of Drain Connection	Enter pipe diameter of drain connection in inches.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Estimated Number of Times Drain Operates a Day	Enter estimated number of times drain operates in a day.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Air Compressor Type	Select from the list air compressor type: <ul style="list-style-type: none"> <li>• Rotary Screw</li> <li>• Reciprocating</li> <li>• Other</li> </ul>	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Air Compressor HP	Enter HP of air compressor.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Compressed Air Pressure (PSIG)	Enter compressed air pressure in PSIG.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Zero Loss Specification Sheet	Upload the specification sheet for the measure.  Indicate/circle which specific equipment is being used for project.	<ul style="list-style-type: none"> <li>• Post-project QA/QC.</li> </ul>
Equipment & Material Costs	Enter equipment and material costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Labour Cost	Enter labour costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>
Design Cost	Enter design costs and include all other costs as indicated on the invoice/final quote.	<ul style="list-style-type: none"> <li>• Calculate eligible incentive.</li> <li>• Post-project QA/QC.</li> </ul>

## STEP 5 OF PRE-PROJECT APPLICATION: ALL COMPRESSED AIR MEASURES

Field	What to Enter	How Data or Input Provided is Used
Cost Quote	Quote or invoice should be itemized to include quantity, brand, model numbers for equipment, applicant name, contractor name, facility address and date (sample quote provided in the Appendix). Costs should be indicated separately for: <ul style="list-style-type: none"> <li>• Equipment and Material,</li> <li>• Labour,</li> <li>• Design and Others, and</li> <li>• Taxes.</li> </ul>	<ul style="list-style-type: none"> <li>• Cross-reference against provided costs.</li> <li>• Calculate incentive cap.</li> <li>• Post-project QA/QC.</li> </ul>
Electricity Bill for Facility	Upload the most recent electricity bill available for the facility.	<ul style="list-style-type: none"> <li>• Ascertain rate class.</li> </ul>

## POST-PROJECT APPLICATION

Note that for the post-project application, you will be required to confirm that no changes were made from the pre-project application, unless an Application Change Approval Notice was issued by ERA. In terms of documents required, you will need to provide evidence of the following:

- Invoice for Project Costs,
- Proof of Payment for Project Costs, and
- Conditions stated in the Notice of Pre-Approval.

Participant may be subject to a QA/QC check and asked for additional documentation to facilitate a site visit.

## APPENDIX

### SAMPLE INVOICE/FINAL QUOTE

Quotes should be itemized to include quantity, brand, model numbers for equipment, applicant name, contractor name, facility address and date. Costs should be indicated separately for:

- Equipment and Material,
- Labour,
- Design and Others, and
- Taxes.

A sample quote is provided below:

	<b>Company Address:</b> XXXX		
	<b>Website:</b> XXXX		
	<b>Phone:</b> XXXX		
<b>PROJECT NAME:</b> XXXX		<b>Project Start Date:</b> XXXX	
		<b>Project Completion Date:</b> XXXX	
<b>Applicant Company:</b> XXXX		<b>Quote #:</b> XXXX	
<b>Applicant Name:</b> XXXX		<b>Date:</b> XXXX	
<b>Facility Address:</b> XXXX			
<b>Phone:</b> XXXX			
<b>Measure #1</b>			
<b>Fixture Description</b>	LITHONIA CPANL 2X4 40/50/60LM 40K M2	<b>DLC</b>	PMS5PPS6
<b>Measure Description</b>	LED 2x4 Recessed Light Fixture - 4,500 – 5,999 Lumen Output	<b>QTY</b>	63
<b>Measure Equipment/Material Costs</b>			\$ 6,538.71
<b>Measure Labour Costs</b>			\$ 13,251.74
<b>Measure Design/Other Costs</b>			\$ -
<b>Measure Total Costs</b>			\$ 19,790.45
<b>Measure #2</b>			
<b>Motor Description</b>	ILA7080-H Siemens Semiotics 10 hp		
<b>Measure Description</b>	Premium efficient motor –ODP-10 hp	<b>QTY</b>	1
<b>Measure Equipment/Material Costs</b>			\$ 934.10
<b>Measure Labour Costs</b>			\$ 123.11
<b>Measure Design/Other Costs</b>			\$ 50.00
<b>Measure Total Costs</b>			\$ 1,107.21
<b>Measure #3</b>			
<b>Sensor Description</b>	Occupancy Sensor		
<b>Measure Description</b>	Fixture Mounted Sensor	<b>QTY</b>	305
<b>Measure Equipment/Material Costs</b>			\$ 15,250.00
<b>Measure Labour Costs</b>			\$ -
<b>Measure Design/Other Costs</b>			\$ -
<b>Measure Total Costs</b>			\$ 15,250.00
<b>Total</b>			
<b>Total Equipment/Material Costs</b>			\$ 22,722.81
<b>Total Labour Costs</b>			\$ 13,374.85
<b>Total Design/Other Costs</b>			\$ 50.00
<b>Total Project Cost</b>			\$ 36,147.66
<b>GST</b>			\$ 1,807.38
<b>Total Cost w/ GST</b>			\$ 37,955.04